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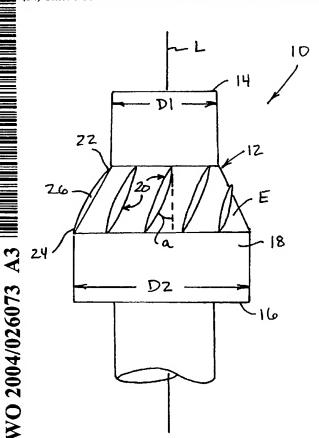
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(54) Title: ROTATING MANDREL FOR EXPANDABLE TUBULAR CASING



(57) Abstract: An expansion mandrel (10) for expanding tubular casing includes a tapered expansion portion having expansion segments (20) which are angularly disposed on an external surface of the mandrel (10). The segments (20) reduce friction and cause the mandrel (10) to rotate in response to the mandrel (10) being moved through the casing during expansion of the casing.

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International application No.

PCT/US03/25715

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : E21B 23/00 US CL : 166/207,384 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) U.S.: 166/207,384,206,380			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where ar	propriate, of the relevant passages	Relevant to claim No.
х	US 6,325,148 A (Trahan et al.) 4 December 2001 (10-35.	04.12.2001), Fig. 9 and col. 6, lines	1-3,4,9,13-15,17,20
X,P	US 6,457,532 A (Simpson) 1 October 2002 (01.10.2002), Figs. 20, 22 24, and col. 12,		1-7,13-17,19
Y,P	line 27- col. 14, line 9.		8,10-12,18,21-22
x	Figure 1.		1-5,13-16
Y			8,18
Y,P US Patent Application Publication 2003/0075338 (Sivle Fig. 10 and paragraph 0118 on pages 9-10.			10-12,21,22
х	US 3,039,530 A (Condra) 19 June 1962 (19.06.196	2), Fig. 1, col. 1, lines 7-12.	1-3,6,9
	documents are listed in the continuation of Box C.	See patent family amex. "T" later document published after the in	ternational filing date or
"A" document defining the general state of the art which is not considered to be of particular relevance		priority date and not in conflict with understand the principle or theory ur	the application but cited to
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